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Section I

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IN THIS ISSUE

Cotton Mills and the Futures Market, by Eugene G. Boutelle..... 1141

Cost Distribution in the Telephone Business, by O. T. MacMillan.... 1163

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EDITORIAL DEPARTMENT NOTE

During the past years of widely fluctuating cotton markets the hedging methods used by many mills to protect themselves from adverse changes in the level of their raw material prices have been found to be inadequately controlled. The first article in this Bulletin provides some practical suggestions for more accurate control of operations in the futures market than is in effect in most mills. These are preceded by a description of typical transactions in the cotton futures market which should provide valuable explanation of a phase of business operations which is looked upon as a great mystery by the uninitiated. Cotton is not the only commodity with a fluctuating price where the manufacturer can protect himself against radical price changes by dealings in the futures market. It is felt that the procedure outlined can be applied just as well in accounting for the position of a firm in the rubber, coffee or grain market as in the cotton market. The material presented here is recommended to our readers as a most worthwhile contribution toward a better method of controlling future trading for price protection.

The author, Eugene G. Boutelle, has been for many years a supervising accountant with Lybrand, Ross Bros. & Montgomery. He is an active member of the Boston Chapter of the National Association of Cost Accountants and is a member of the American Institute of Accountants and Massachusetts Society of Certified Public Accountants. Before entering professional work Mr. Boutelle had extensive experience in textile manufacturing companies. The installation of improved methods of accounting for textile mills, particularly the continuous control of operations through standard cost systems, has occupied much of his professional time during recent years.

Our second article on "Cost Distribution in the Telephone Business" was presented as a talk before the New York Chapter on the occasion of their visit to the plant of the New York Telephone Company. It is of especial interest because of the discussion of the various bases used by this public service company in distributing different kinds of overhead expense. It is interesting to have emphasized the fact that public utility accounting deals largely with the same problems of cost allocation as are found in an industrial concern. The author of this article, O. T. MacMillan, attended the public schools of Pennsylvania and New Jersey and graduated from Cornell University with an A.B. Degree, in 1924. In the same year he entered the service of the New York Telephone Company. Since that time he has been engaged in various phases of accounting work for that company with the exception of one year spent with the New Jersey Telephone Company immediately following its organization. Mr. MacMillan is at present Chief Accountant for the Bronx-Westchester area.

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COTTON MILLS AND THE FUTURES MARKET

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THE purpose of this article is to describe briefly transactions in the cotton futures market which may operate as protection in part at least against losses arising from fluctuations of the cotton market or as speculative ventures at will of the management. There are certain price hazards connected with the buying of cotton and the sale of goods which cannot be guarded against except through good judgment of probable future outcome but a portion and in many cases the greater part of the risks can be offset by careful operation in the futures market.

Futures.—The term "futures" is applied to contracts for the delivery of cotton in a specified future month entered into between members of an organized cotton exchange. The buyer is said to have a long contract and the seller to have a short contract. Each contract is for "50,000 pounds in about 100 square bales" and results eventually in a delivery of cotton between buyer and seller or in a cash adjustment representing the difference between the price named in the contract and the market price at date of settlement. Comparatively few future contracts are closed by delivery of cotton, the great majority being settled prior to maturity by cash payments.

The quality of cotton is designated by its grade and staple. Grade refers to color or degree of whiteness and to the content of leaf, hull, cut seeds and similar matter other than actual fibre. Staple relates to the length and strength of the fibre. Delivery of the following grades in satisfaction of future contracts is permitted by the New York exchange (listed in order of grade beginning with highest):

Middling fair
Strict good middling
Good middling
Strict middling
Middling
Strict low middling
Low middling

Grades below low middling are called "strict ordinary" and "ordinary." Sometimes the qualifications "tinged" or "stained" are added to the grade names.

The price per pound stated in the future contract is always for middling cotton of 7/8 inch staple with additions or deductions in the event of delivery of other grades and staples in accordance with provisions of the United States cotton futures act which also provides a method of determining the amounts of the additions or deductions and prohibits the delivery on future contracts of grades lower than low middling as well as cotton, the staple of which is less than 7/8 inch. The seller has the option of delivering any of the grades mentioned above at maturity of the contract but if a cash settlement is made canceling the contract prior to maturity the amount of the payment is calculated in accordance with the net change in the quoted price of middling as stated in the contract. Deliveries are insignificant compared with the total bales traded, probably not more than 1%.

A mill buys and sells futures through a broker or merchant who is a member of an exchange or is connected through partnership or otherwise with a member of an exchange. The mill's long contracts are not allowed to mature because the seller having, within certain limits, as explained above, an option as to the grade which he will deliver, the mill obviously would be unable in this manner to obtain the particular kinds of cotton needed. As to short futures there is perhaps a remote possibility that a mill having on hand a quality of cotton not suitable for its purposes might dispose of it in even hundred bales by selling futures against which at maturity the cotton might be delivered. With this possible exception the mill uses the futures market exclusively for hedging its purchases of cotton or sales of goods, or for speculative purposes.

Spots.—Originally this term was applied to "cotton on the spot" offered for immediate delivery. The word is applied now by the trade to all transactions in cotton which are not directly related to futures. The published spot quotations of the exchanges refer to middling cotton of 7/8 inch staple but to the mill a spot price is whatever it may pay in cents per pound for a particular lot of cotton of any specified grade and staple. Such a price includes

the premium if quality is above middling 7/8 inch or is net of the discount if it is below that grade and staple.

The term spots does not now have any reference to delivery; a mill may buy cotton at a spot price for delivery several months hence.

Basis.—The premium above ("on") or the discount below ("off") the prices of future contracts which the mill pays for the specific qualities of cotton purchased is called "basis." It represents not only the price differential between various qualities of cotton but also the cost of doing business by the cotton merchant and the net profit he hopes to realize. This will be more readily understood when it is pointed out that the merchant's purchases are subject to similar differentials or bases and that aside from any speculative interest in the market, the difference between his "buying basis" and "selling basis" represents in theory at least, his gross profit. The business of the merchant is not as simple as this might indicate for the reason, among many others, that from the standpoint of the mills one of his chief functions is to gather large quantities of cotton which he grades or "classes" into "even-running bales" to meet the requirements of his customers.

A principal factor in the rise and fall of basis is supply and demand of specific qualities of cotton. Basis is an important matter to the mill because at times it is subject to substantial fluctuations, with no necessary relation to changes in prices of futures which, as previously pointed out, refer only to middling cotton of 7/8 inch staple.

Call Cotton.—Frequently a mill desires to buy for immediate or early delivery a quantity of its customary grade and staple although it has not yet sold the goods requiring such cotton. It needs cotton perhaps to produce goods for stock in order to meet the demands of its trade upon the later opening of a season; or it is believed that the supply of the specific quality required is now plentiful and the basis correspondingly favorable. Whatever the reason, the merchant may offer the cotton at a basis of a certain number of points on or off the exchange quotation for a specified future month, giving the customer the right to call the price prior to a future date agreed upon, in other words, giving the customer the right of decision as to the moment when the

market quotation for the specified month shall, with the basis originally offered, determine the final price. For example, in December, 1932 suppose the price offered to be 200 points (hundredths of a cent) on May, 1933 for 1,000 bales. It will be observed that the basis is fixed at 200 points on, but that the price which the mill will eventually have to pay depends upon the rise and fall of May contracts which at acceptance of the offer by the mill, let us suppose, are quoted at 10¢.

The cotton is delivered to the mill immediately or in whatever instalments are arranged for and the merchant sends the mill an invoice at a provisional price representing 200 points on the price of May contracts at day of shipment which, let us say, totals 12¢ per pound.

Now suppose that in March the mill sells enough goods to cover the thousand-bale purchase and that May futures have declined to 8¢. The mill notifies the merchant that it desires to call or fix the price the total of which now becomes 10¢ per pound (current quotation 8¢ plus basis originally agreed upon 2¢) in place of the 12¢ previously invoiced and the merchant remits the difference of 2¢.

The mill thus is enabled to adjust the cost of the cotton bought in December, which it may be assumed was made up into goods soon thereafter, to the level of market quotations in March when the goods are sold; but it is unable to adjust the basis which remains at 200 points on May as agreed upon at the outset.

The mill is not compelled to call the price at the time the goods are sold, but can do so whenever it believes the market favorable before or after sale of the goods within the time limit agreed upon at the outset which, however, can be extended or "switched" to a later time if desired. In fact, it is possible to buy cotton on call, make it up into goods, deliver the goods and complete the cycle by collecting payment from the customer before the final cost of the cotton used becomes known. Such a proceeding, however, departs from the idea of protection and definitely enters the field of speculation. The mill can obtain precisely the same results by buying cotton outright and selling futures against the purchase except that it will be put to some additional expense for broker's commission on futures sold. Suppose, for illustration that the mill bought the 1,000 bales in December at 12¢ per

pound outright (including basis of 200 points on May) and at once sold 10 May contracts (100 bales to a contract) quoted at that time at 10¢. When the goods are sold in March the short Mays are bought in at 8¢, the profit on the futures being 2¢ per pound, which, applied to the invoiced price of the cotton, reduces the cost to 10¢, the same as in the case of the call purchase.

Hedging.—Webster defines the verb hedge, "To safeguard oneself from loss (on a bet or speculation) by making compensatory arrangements on the other side." The purchase of fixed-price cotton prior to the sale of goods to be made from it, or the sale of goods prior to purchase of the cotton at fixed price, are the speculations while the compensatory purchases or sales of futures are the hedges. Cotton bought on call may be said to be self-hedged because, as shown above, it is protected to the same degree as an outright purchase against which futures are sold. Hedging may be thought of as a kind of insurance against the losses arising from unfavorable fluctuations in the market value of cotton, but it does not offer complete protection.

The risks to which the mill is subject in the purchasing of cotton and the sale of that cotton in goods are defined as follows:

1. Rise and fall of cotton market as measured by prices quoted on the exchanges for middling 7/8 inch cotton.
2. Fluctuation of basis (premium or discount on various grades, see page 1143).
3. Changes in prices obtainable for goods.

A constant relation in the movement of these factors cannot be expected. The cotton market may rise without affecting the goods market or the latter may fall. Goods prices may show an upward trend while cotton prices stand still or fall. Basis may "narrow" or "widen" with little or no relation to the other two factors. Only the first factor mentioned above, rise and fall of cotton prices as quoted on the exchanges, is subject to the protection of hedging by means of transactions in futures.

We have seen how the mill by purchasing on call, or by buying at an outright or spot price and hedging the purchase by sales of futures, may offset the effect of a declining cotton market during the interim between the purchase of cottton and the later sale

of the goods made from it. Conversely, a sale of goods can be immediately covered by a purchase of futures offsetting the effect of a rising market in the interim between the sale and the later purchase of cotton. The mill thus is protected in respect to the risk from unfavorable changes in market prices of middling 7/8 inch cotton during the interim between the purchase of cotton and the sale of goods. The protection so gained may not be exact because of variations during a given period in the price changes of the different delivery months of the futures bought or sold for hedging purposes.

The cotton buyer should buy cotton when qualities used by the mill are plentiful and basis (the second risk factor listed above) correspondingly favorable and he must arrange deliveries so that there will be no delay in production from lack of raw material. Therefore, it is seldom feasible to place fixed price contracts for the required cotton simultaneously with acceptance of sales orders for goods. The mill has no safeguards against losses from fluctuations in the price of basis other than the ability and judgment of its buyer. Basis is an important element of cotton cost especially in connection with long staple cottons where it is not uncommon to find it as high as 600 to 800 points on.

While in the long run the prices obtained for goods must follow the trend of the cotton market, during a short period movement of the goods market simultaneously with movement of the cotton market, in the same direction and to the same extent, may not take place. The mill's protection against losses arising from this, the third risk factor, lies with the selling organization's ability to obtain a sufficient volume of business at prices conforming closely to current replacement costs of cotton. In some lines there may be a determinable average lag in changes of goods prices behind those of cotton prices and if this could be anticipated with reasonable accuracy allowances might be made for it in the hedging operations.

Control of Hedging Operations.—A mill having comparatively few transactions might hedge its individual contracts of purchase or sale, keeping separate records for each, but in large concerns where the transactions are numerous and follow each other rapidly such a method is not attempted. It would be too expensive to operate and too cumbersome.

The matter is usually handled by balancing all the cotton assets and liabilities, that is, a balance is struck to determine whether the mill is in a net long or net short position on all its commitments and inventories affecting cotton. It is this balance or position which is hedged or allowed to remain open according to the judgment of the management. A statement of position as at a specified date is illustrated by Form No. 1.

Long	*Bales*	
Contracted for with dealers, not yet received	1,500	
Raw cotton on hand	1,100	
Cotton on hand in process (equivalent number of raw bales)	1,200	
Cotton in cloth on hand (equivalent number of raw bales)	1,200	
Long futures outstanding	3,000	
		8,000
Short		
Call contracts outstanding (these are included above with cotton contracted for with dealers, cotton on hand in bales, in process, in cloth, or possibly represent cotton in goods which have been delivered and billed to customers)	1,000	
Cotton required for unfilled sales orders	5,000	
Short futures outstanding	1,000	
		7,000
Net long position		1,000
(To balance sell 10 contracts equivalent to 1,000 bales futures or close out 1,000 bales long futures)		

FORM NO. 1.

The frequency with which the net position should be determined for hedging purposes depends largely upon the volume of transactions and activity of the cotton market. Probably there are few concerns who would not benefit from striking at least a daily balance and there may be some who should do it oftener. Having made up the position as shown above, it may be readily adjusted to show the new balance daily or as often as hourly if activity of cotton or goods market appears to require such close attention. A plan for adjudging the position to give effect to hourly changes is shown in Form No. 2:

Cotton Position Record Date.....19..

Time	Purchases Description	Bales	Sales Description	Bales	Long *Short* Position
A.M.					
9.00	Balance from previous day				1,000
10.00	Fixed price contract placed with dealer	500			1,500
11.00	Price fixed on call contracts previously placed with dealers	1,000	Required for sales orders taken	2,000	500
M.					
12.00			Futures sold	500	0
P.M.					
1.00	Futures bought	1,000	Required for sales orders taken.....	1,000	0
2.00	Fixed price contracts placed with dealers.....	1,000	Required for sales orders taken	750	250
3.00	Price fixed on call contract	500	Futures sold	600	150

FORM NO. 2

A continuously balanced position leaves the mill subject only to the losses and gains which may arise from changes in prices of basis and from fluctuations in the goods market which may lag behind or may be out of line with those of the cotton market. Such a continuous record as is illustrated above should be corrected from time to time by inventorying the position as set forth on the preceding page.

Price of Cotton Position.—Under the method so far described quantities only are dealt with without consideration of unit costs or total values. This method is adequate when a balanced position is constantly maintained but it is inadequate when the mill carries a long or short position, that is an unbalanced position. Obviously for that purpose it is necessary to know the price level of the position in order to determine whether or not it is favorable with reference to the current market price.

Very little has been done by cotton mills toward establishing routine methods for carrying out this idea and the plan described in the following pages, therefore, is offered tentatively without any great background of common usage.

Price of Long Cotton Position Compared with Market.—Since we are seeking to determine the unit price and total value of the position we must deal separately with each quality (grade and staple) of cotton used and if futures are dealt in they must be

bought or sold specifically in connection with particular qualities of cotton. The terms unit price and total value have reference to dealers' quotations for the quality of cotton under consideration, not to exchange quotations.

Under this method the cotton position is regarded as including the cotton on hand (raw, in process and in goods) and cotton contracted for with dealers but not yet received. Call contracts become a part of the cotton position as soon as entered into by buyer and seller, and are priced at the then market price for the month named in the contract plus or minus the agreed upon basis. Futures are not included as a part of the cotton position, gains or losses on those outstanding and changes in the market prices applicable to call contracts, being applied as adjustments to the cost of the cotton position. The mill's position on futures is arrived at independently of the cotton position (see page 1152). A perpetual position record for one quality of cotton is illustrated on Form No. 3 showing a daily balance of pounds with unit and total cost values.

Amounts expressed in italics represent either a short position or a net disadvantage.

Such a record is started with an inventory (see line 1, Form No. 3) of cotton on contract not yet received (including call contracts on which cotton has not yet been received) and cotton on hand in bales, together with the equivalent raw weight of cotton in process and that contained in cloth on hand, all representing cotton of a specific quality. The total of these quantities is reduced by what is required for the unfilled orders for goods taking the same kind of cotton.

A quantity equal to the total of the outstanding call contracts then is priced at market for the months named in the contracts plus or minus the bases also stated in the contracts. The remainder is priced at cost which it may be assumed is represented by the most recent fixed-price invoices covering an equal quantity. The total of the values so arrived at then should be adjusted by the net gain or loss as accrued at the inventory date on outstanding futures.

The next two items of Form No. 3 (lines 2 and 3) represent totals for the day of contracts placed with vendors, call contracts being priced at market for the months named in the contracts

COTTON POSITION
(Long *Short*)

Grade Strict Middling Staple 1¼" Mark TENN

LINE	Date 1933		Pounds	Price per Pound	Value	Advantage *Disadvantage*
1	Feb. 1	Position	250,000	10.00¢	$25,000.00	
2		Fixed price contracts placed	225,000	9.56	21,512.50	
3		Call contracts placed	80,486	9.71	7,809.87	
4					54,322.37	
5		Net [gain] loss on futures and call contracts			250.00	
6			555,486	9.82	54,572.37	
7		Requirements of sales orders taken	117,500	9.82	11,538.50	
8	2	Position	437,986	9.83	43,033.87	
9		Fixed price contracts placed	451,232	10.24	46,213.16	
10		Call contracts placed	75,661	10.25	7,755.26	
11					97,002.29	
12		Net [gain] loss on futures and call contracts			164.62	
13			964,879	10.07	97,166.91	
14		Requirements of sales orders taken	456,250	10.07	45,944.38	
15	3	Position	508,629	10.07	51,222.53	
16		Fixed price contracts placed	325,000	11.05	35,900.00	
17		Call contracts placed	50,750	11.00	5,582.50	
18					92,705.03	
19		Net [gain] loss on futures and call contracts			713.80	
20			884,379	10.56	93,418.83	
21		Requirements of sales orders taken	252,500	10.56	26,664.00	
22	4	Position	631,879	10.56	66,754.83	
23		Fixed price contracts placed				
24		Call contracts placed				
25					66,754.83	
26		Net gain [loss] on futures and call contracts			1,097.21	
27			631,879	10.39	65,657.62	
28		Requirements of sales orders taken	227,500	10.39	23,637.25	
29	6	Position	404,379	10.39	42,020.37	

FORM No. 3

plus or minus the specified bases. On line 5 should be entered the net or total gain or loss for the day on outstanding futures including that represented by changes in market prices applicable to call contracts, gain to be deducted from the amounts previously entered or loss to be added while the cotton position remains long (the procedure for a short position will be described later). Two forms of record are required to accumulate the daily totals for such gain or loss here illustrated by Forms No. 4 and 5, the former for futures and the latter for call cotton contracts. The net losses and gains shown on these do not correspond with the losses and gains appearing on Form No. 3 (lines 5, 12, 19 and 26) because it is assumed that there are a considerable number of transactions each recorded on a separate sheet of Form No. 4 or No. 5 the results of all being summarized daily for entry on Form No. 3.

FUTURES RECORD

Applicable to Strict Middling 1¼" TENN

Date Feb. 1, 1933 Bought or Sold Bought

Contract Price 6.70¢ Delivery Month October

Bales 300 Pounds 150,000

Date 1933	Exchange Quotation	Gain *Loss* for Day Per Pound	Total
Feb. 1	6.20¢	*.50¢*	*$ 750*
2	6.74	.54	810
3	7.45	.71	1,065
4	6.91	*.54*	*810*

FORM NO. 4

CALL COTTON

Grade Strict Middling Staple 1¼" Mark TENN

Contract Date Feb 1, 1933 Vendor Hubbard Bros. & Co. Basis 360 Pts. On [Off]

Month May Bales 50 Pounds 25,000 Market for Specified Month at Date of Contract 6.00¢

Date 1933	Exchange Quotation (For middling 7/8")	Gain *Loss* for Day Per Pound	Total
Feb. 1	6.00¢		
2	6.54	*.54*	*$135.00*
3	7.20	*.66*	*165.00*
4	6.70	.50	125.00

FORM NO. 5

It will be seen from a study of these two forms that the gain or loss is accrued for the first day based on the contract price in the case of futures and on market at date of contract in the case of call cotton and that thereafter the gains or losses represent the net changes in market prices during each day. The futures position is readily determined from these records by adding together the pounds of outstanding long futures (bought) and deducting therefrom the total pounds of the outstanding short futures. The latter should include the pounds of call contracts so that the futures position may be considered in connection with the cotton position in which, as previously explained (page 1149), all the outstanding call contracts are included. The prices of the cotton position are not comparable with those of futures because basis is included in the price of the cotton position and excluded from that of the futures position. The prices stated in future contracts as previously explained (page 1142) are always for middling ⅞ inch cotton which, being the standard grade, carries no basis or quality differential.

The gains and losses of each day shown on Forms No. 4 and 5 for the various outstanding futures and call cotton contracts should be summarized to arrive at the net gain or loss to be entered on line 5 of Form No. 3.

On line 6 of Form No. 3 a new average unit price is determined by dividing total pounds into total dollars and this unit price is applied on line 7 to the pounds of the kind of cotton named at the head of the sheet and required for the sales orders for goods taken during the day. Line 7 deducted from line 6 shows on line 8 the long cotton position, together with its unit price and total value. A regular procedure must be established for accumulating the cotton requirements of sales orders taken each day for entry on Line 7.

In many cases calculation of cotton position at the close of each day is sufficient but there is nothing except the additional clerical work to prevent its determination as often as appears to be warranted by the particular conditions. In any event the cotton position record should be corrected at intervals by means of an inventory such as is described on page 1149 for starting the record. Ordinarily, however, such an inventory may be priced at the price per

pound shown on the record as at the inventory date. But if the inventory shows a large error in the pounds of the position record it may be necessary to price the inventory by the method described on page 1149. Corrections may also be made, during the interim between physical inventories, for the differences between the actual weights of cotton as received and the estimated weights in connection with the contracts for that cotton previously entered in the position record.

Let us now consider how the data shown on Form No. 3 may be used to advantage. First, it should be kept in mind that the unit prices appearing on the position record are comparable with prices a dealer might quote for the specific quality including premium basis ("on") or net of discount basis ("off") so that comparable market prices must be obtained from dealers and cannot be secured from exchange quotations. Dealers' quotations of course are related to exchange quotations and often are expressed in a manner indicative of that relation, for example, "300 points on May" which, assuming May contracts are quoted on the exchange at 7¢, means 10¢ per pound for the cotton to be delivered by the dealer. It should also be remembered that the position represents price commitment only and has nothing to do with actual stocks of cotton available for production requirements.

Beginning on the morning of February 1 the record illustrated shows a long position of 250,000 pounds at 10¢ per pound. During the ensuing three days the market gradually advances as indicated by the contracts placed (lines 2, 3, 9, 10, etc.). The price of the long cotton position at the opening of business February 1, 2 and 3 is well below the market and so long as the market does not decline below the price at which a long position is carried, the mill is safe. At the close of business February 3 the mill is long 631,879 pounds (about 1,263 bales) of strict middling, 1¼" cotton (mark TENN) at 10.56¢. The next day (February 4) the market reacts and cotton of that grade and staple can be bought for 10.50¢ down to 10.40¢. The long cotton position at 10.39¢ is still safe but must be closely watched and if it is desired to take no further risk futures may be sold at once to cover that part not already protected by outstanding short futures which of course must always be considered in connection with the cotton position.

Price of Short Position Compared with Market

Suppose now that the market continues to decline and the mill desires to assume a short cotton position; it may often do so by placing no fixed price contracts for cotton against the sales orders taken for goods except as may be required for immediate production needs. We then have a situation which is the opposite in every respect from that under the long cotton position. While formerly we were in effect selling goods out of a stock of cotton the price of which was determined for each day's sales, we shall now be selling goods for which at some later time cotton must be supplied and prices determined.

The long position record should be closed. Referring to the position record illustrated on page 1150, suppose that on February 6 the desired quality of cotton was offered at 9.64¢ and the mill, believing that an extensive decline had set in, desired to assume an unhedged short cotton position. It would close its outstanding long futures and its long cotton position, the latter by application of a sufficient quantity of cotton required for the sales of the day. This closing quantity should be priced at dealers' quotations for the day so that the net advantage or disadvantage may be brought out as explained below.

The sales orders received that day are assumed to have been more than ordinarily large, requiring cotton for their manufacture amounting to 654,182 pounds of which 404,379 pounds would be applied to closing the long cotton position as described above. The remainder of 249,803 pounds then would constitute the short cotton position and would be priced on the record at dealers' quotations for the day on which the sales orders were taken, forming a gauge by which to measure the advantage or disadvantage of later purchases to supply the required cotton. So long as a short cotton position is maintained the cotton required for each day's sales is priced on the position record at market for that day (dealers' quotations). The record carried on from the long position on page 1150 would appear as shown in Form No. 3A.

The disadvantage shown below at $956.92 results from owning 404,379 pounds of cotton at a unit price of 9.88¢ while the market (dealers' quotations) is 9.64¢.

COTTON POSITION

(Long *Short*)

Grade Strict Middling Staple 1¼" Mark TENN

Date 1933		Pounds	Price per Pound	Value	Advantage *Disadvantage*
Feb. 6	Position (balance from page 1150).....	404,379	10.39¢	$42.020.37	
	Fixed price contracts placed.....				
	Call contracts placed				
				42,020.37	
	Net gain [loss] on futures and call contracts.....			2,081.31	
		404,379	9.88	39,939.06	
	Requirements of sales orders taken.....	404,379	9.64	38,982.14	*$956.92*
7	Position*	*249,803*	*9.64*	*24,081.01*	*956.92*

*As represented by remainder of cotton required for sales of goods for Feb. 7, see page 1154.

FORM No. 3A

In the long cotton position advantage increases with decrease of the position's unit price but when the position is short advantage becomes greater as the position price rises. Gains on outstanding futures and calls contracts operate to increase the short position price while the effect of losses is to reduce the position price. Form No. 3B which follows is a continuation of Form No. 3A above and illustrates the recording of transactions under a short cotton position.

In the next example the unit price of the short cotton position on the morning of February 9 was 9.82¢ and the purchase on that day of 100,000 pounds at 9.40¢ therefore was advantageous. Other purchases may be made advantageously or, at least, safely as long as the price paid is not in excess of the short position price.

Now suppose that on February 10 the market reacts strongly. Let us say for purposes of illustration that at the close of that day the particular kind of cotton under consideration is being offered at 11.02¢ per pound. Early in the day, however, the mill was able to cover 200,000 pounds of its short position with purchases at 9.50¢ and closed all short futures outstanding as well as fixed the prices on all outstanding call contracts. By noon sales had been made at prices reflecting a cost of 10.26¢ for the cotton and requiring 350,000 pounds of the particular quality under consideration. May futures were bought to cover these sales as well as the remainder of the short position with which the day opened, the total futures bought amounting to eleven contracts (1,100 bales) which were secured at 8.75¢.

The effect of these transactions is illustrated in the following position record (Form No. 3C) which shows a short cotton position at the beginning of February 11 of 528,274 lbs. at a price of 10.05¢ which as mentioned above is protected by 1,100 bales (550,000 pounds) of May futures bought at 8.75¢.

During that day (February 11) the quality of cotton with which we are dealing rose to 12.02¢ including basis. May futures closed at 11.02¢ and calculated on this quotation the gain on the 11 contracts bought on the preceding day amounted to $12,485 which applied to the short cotton position, together with the cotton required for the day's sales (300,000 pounds) leaves us at the close of February 11 with a short position of 828,274 pounds at 12.27¢ against vendors' quotations of 12.02¢. However, 550,000 pounds

COTTON POSITION

(Long *Short*)

Grade Strict Middling Staple 1¼" Mark TENN

Date 1933		Pounds	Price per Pound	Value	Advantage *Disadvantage*
Feb. 8	Position (balance from page 1155)	*249,803*	*9.64¢*	*$24,081.01*	*$956.92*
	Fixed price contracts placed				
	Call contracts placed				
				24,081.01	
	Net gain [loss] on futures and call contracts			*1,051.11*	
		249,803		*25,132.12*	
	Requirements of sales orders taken	*152,671*	*9.42*	*14,381.61*	
9	Position	*402,474*	*9.82*	*39,513.73*	
	Fixed price contracts placed	100,000	9.40	9,400.00	
	Call contracts placed				
				30,113.73	
	Net gain [loss] on futures and call contracts			*334.45*	
		302,474		*30,448.18*	
	Requirements of sales orders taken	*75,800*	*9.35*	*7,087.30*	
10	Position	*378,274*	*9.92*	*37,535.48*	*956.92*

FORM No. 3B

COTTON POSITION

(Long *Short*)

Grade Strict Middling Staple 1¼" Mark TENN

Date 1933		Pounds	Price per Pound	Value	Advantage *Disadvantage*
Feb. 10	Position (balance from page 1157)	*378,274*	*9.92¢*	*$37,535.48*	*$956.92*
	Fixed price contracts placed	200,000	9.50	19,000.00	
	Call contracts placed				
				18,535.48	
	Net [gain] loss on futures and call contracts			1,350.00	
		178,274	*9.64*	*17,185.48*	
	Requirements of sales orders taken	*350,000*	*10.26*	*35,910.00*	
11	Position	*528,274*	*10.05*	*53,095.48*	*956.92*

FORM No. 3C

of the short cotton position is still protected by the 1,100 bales of long futures, the unprotected balance being 278,274 pounds. These transactions and their results are shown in the following continuation of the cotton position record (Form No. 3D) which also shows the transactions of the next business day.

On the following business day (Monday, February 13), as shown in the above record, goods were sold which would require 263,101 pounds of cotton. The mill was able to place an order for 2,200 bales (about 1,100,000 pounds) of cotton at a fixed price of 12.02¢, more than covering the short position brought over from February 11 and the requirements for the sales of the current day. The 1,100 bales of May futures were sold out at a slight advance over the previous day's quotation.

It will be seen that 828,274 pounds of the purchase were applied to close the mill's long cotton position and that this, together with a small additional gain on the May futures which were sold, result in an advantage of $2,631.95 brought about by buying cotton at 12.02¢ to supply a short position the unit price of which is 12.27¢ and more than offsetting the disadvantage of February 6 ($956.92) when the cotton position was changed from long to short (page 1155). The remainder of the February 13 purchase, 271,726 pounds, is entered separately on the record and the cotton required for sales of the day deducted to arrive at the long cotton position with which to begin the following day.

Advantage and Disadvantage

Advantage results from a long cotton position at a price below the market or from a short cotton position at a price above the market. Conversely, the mill is at a disadvantage if it has a long position at a price above the market or a short position at a price below the market.

In the foregoing examples the daily advantage or disadvantage is absorbed in the unit price until the changes of cotton position from long to short or short to long take place, at which time the total amount of advantage or disadvantage is determined and set aside in the column provided for that purpose. It would be possible to carry forward advantage or disadvantage indefinitely as adjustments to the unit price of the position but the change of policy indicated by the change in cotton position ordinarily would

COTTON POSITION

(Long *Short*)

Grade Strict Middling Staple 1¼" Mark TENN

Date 1933		Pounds	Price per Pound	Value	Advantage *Disadvantage*
Feb. 11	Position (balance from page 1158)	*528,274*	*10.05¢*	*$53,095.48*	*$ 956.92*
	Fixed price contracts placed				
	Call contracts placed				
				53,095.48	
	Net gain [loss] on futures and call contracts			*12,485.00*	
		528,274	*12.41*	*65,580.48*	
	Requirements of sales orders taken	*300,000*	*12.02*	*36,060.00*	
13	Position	*828,274*	*12.27*	*101,640.48*	
	Fixed price contracts placed	828,274	12.02	99,558.53	
	Call contracts placed				
				2,081.95	
	Net gain [loss] on futures and call contracts			*550.00*	2,631.95
	Requirements of sales orders taken				
	Position				
	Fixed price contracts placed	271,726	12.02	32,661.47	
	Call contracts placed				
	Net gain loss on futures and call contracts				
		271,726	12.02	32,661.47	
	Requirements of sales orders taken	263,101	12.02	31,624.74	
14	Position	8,625	12.02	1,036.73	1,675.03

FORM No. 3D

seem to be a logical point at which to set up the accrued advantage or disadvantage and to make a new start on the position price. However, such a new start can be made at any time when in the operator's judgment it is necessary or desirable, by comparing the value of the position with the current market value and laying aside the resulting total advantage or disadvantage in the column provided for that purpose on the cotton position record.

Total advantage may offset a later disadvantage but such an offsetting of advantage and disadvantage may be misleading in connection with current operations unless it is confined to a reasonable length of time. Probably in no case should it extend beyond the company's fiscal year.

Doubtless there will be periods when the cotton position will run from short to long and back again several times in the course of a few days and the taking out of advantage or disadvantage at each position change may not be practical or necessary. In that event the advantage or disadvantage would be determined for the old position in the manner described above and the total value of the new position would be adjusted accordingly in the following manner:

Change of position from long to short:
Add advantage or deduct disadvantage shown by old long position to or from total value of new short position.

Change of position from short to long:
Deduct advantage or add disadvantage shown by old short position from or to total value of new long position.

Conclusion

Briefly stated the suggested methods described above should enable the mill to determine the unit prices of its long or short cotton position for comparison with current market prices as quoted by vendors, including basis, as an aid to judgment in deciding whether it is more advantageous to maintain a long or short cotton position than to seek the protection afforded by purchase or sale of futures.

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COST DISTRIBUTION IN THE TELEPHONE BUSINESS

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IN ORDER that you may understand more clearly the reasons for some of the accounting practices which I will describe, it might be well first of all to point out some of the more important differences between the conditions under which a telephone company operates and those encountered by the average industrial concern. Perhaps the chief difference, from an accounting standpoint, is the fact that all large telephone companies operate under a system of accounts prescribed by the Interstate Commerce Commission. Under this system of accounts, we are required to maintain our books at all times on an actual cost basis. This applies to the accounts reflecting the amounts invested in property, as well as to the accounts reflecting current operating expenses. This accounting system further requires that the primary expense and investment accounts include all charges assignable thereto whether in the nature of direct expenditures or of overhead.

To illustrate, under our accounting system the accounts reflecting maintenance of the plant include not only the labor and material expended in such work, but also such costs as those of operating vehicles used in the course of the work, a proper proportion of the cost of or depreciation on tools used up on the job, a share of the salaries and expenses of the management group supervising the work, etc. Thus our accounting records involve, in their preparation and tabulation, the application of cost accounting practices as an integral part of our financial and administrative accounting to a greater extent than is true in most other businesses.

In the Bell System, a valuable adjunct of the Uniform System of Accounts are the associated standard accounting methods and practices coordinated by the American Telephone and Telegraph Company. These make possible the use of direct intercompany comparisons in measuring the efficiency of various organizations and operations in lieu of a reliance on predetermined standard costs which many industrial concerns have developed for themselves as yardsticks to measure their own efficiency.

Other important differences between the telephone and manufacturing businesses are found in the peculiar physical characteristics of this industry. These involve: first, daily changes, both increases and decreases, in the amount of plant investment as a result of the constant changes in the number of subscribers to our services; second, the widely scattered nature of the property consisting, as it does, of central office equipment located in almost every town in which we operate, station equipment in the homes and business places of every subscriber, and a veritable network of wires and cables covering the entire state; third, many of our men work alone in extending, replacing or repairing the plant and therefore must be trained to report their own activities in a manner which can be interpreted for accounting purposes. In the case of factory production, of course, much of this work can be done by clerical forces assigned to observe the activities of the producing organization.

Getting down now to a consideration of the various elements of cost which enter into our product and bearing in mind that the product is, of course, telephone calls and telephone services of one kind and another, we find that about the only item which can be compared with the direct labor and material costs which enter into the physical product of the usual industrial concern is the wages paid to the operators. These young women, using the plant facilities which have previously been provided, actually create the service being sold. Such direct costs in the telephone business are relatively minor in comparison with similar figures in other industries. With us they are controlled by means of force adjustments, that is, changes in the number of operators on duty made in anticipation of variations in the hourly and daily demand for our product rather than through cost accounting accumulations made after the product has been "manufactured." Although this cost control process is not an illustration of cost accounting practices, it is, I believe, a very interesting and unusual application of cost accounting principles, and for that reason it should be worth while to diverge for a few minutes from the limits imposed by the subject of our discussion in order to consider it. The cost control methods in use in this connection started with time and motion studies of the steps through which operators must go in completing all of the various kinds of calls which they are required to

handle in achieving our aim of a service free, as completely as possible, from errors, imperfections, and delays. From these studies, work equivalents were set up by means of which all types of calls could be related to a common basis and expressed as so many units of work. Having established the work units or work equivalents for each type of call, we make periodic counts, at least monthly and in many cases more frequently, to determine the total work volumes for different kinds of days, that is, business days, Sundays and holidays, and for different hours of the day, that is, slack hours and busy hours. Applying our predetermined work equivalents, we are then able to convert these counts of the number of calls to figures representing the total work load to be handled. We know, from past experience, the number of work units that operators of varying degrees of experience can handle in an hour, or in a day. Further, from the periodic counts of work volumes just described, it is possible to forecast with considerable accuracy the work volumes which our facilities will be called upon to handle during any particular normal hour and on any particular normal day in the reasonably near future. Thus, it becomes a matter of simple arithmetic to equate the work volume to be handled to a number of operators and to arrange to have on duty a force of the size so indicated to be necessary.

Constant checks are made of all of the factors entering into a decision as to the size of the force required so that we know currently the extent to which our operators are producing the volume of product which efficient operation requires. These factors include the grade of service actually being furnished, the volume of calls actually made as compared with the volume forecast, and a determination of the volume handled per operator as compared with the objective. As mentioned previously, although all of these controls are operated on a work unit rather than on a dollar basis, they do none the less represent a direct application of cost accounting principles as observed in many industrial concerns.

Turning now to the indirect costs of our product, by which I mean such items as plant maintenance, depreciation, interest on borrowed money, engineering and other costs, we find that they represent a large proportion of our total operating expense. Many such indirect costs are, of course, factors of the original cost of plant and therefore we are particularly interested in doing all of

our construction work as economically as possible. The importance of these indirect costs can be more readily appreciated when it is realized that in the New York Telephone Company the money invested in telephone plant is very close to 4 times the total amount of revenue which that plant brings in annually. This, of course, is a very much higher ratio of plant investment to sales than is commonly experienced in other industries. Because of the relative importance of the indirect costs, which are factors of plant investment, most cost accounting applications in the telephone business are in this field.

General Description of Plant Accounting Processes

As many of the workmen engaged in such operations as maintaining, extending and replacing the telephone plant are constantly moving from job to job, their day's work must be broken down into a number of parts and the wage applicable to each part allocated to the account appropriate for that particular job. For this reason and because, as already mentioned, many of the men work alone, we resort to the practice of requiring them to prepare reports daily or weekly of the way in which they have spent their time in order that the Accounting Department may make the necessary distributions. The time indicated on these reports must, of course, be classifiable from an accounting standpoint and, accordingly, it is necessary that workmen preparing such reports recognize the accounting classifications of all of the various operations which they are called upon to perform. This means that the accounting distinctions with respect to each of the many classes of plant must be known to the workmen and also that they must be familiar with the distinction between operations which are considered to be construction, those classifiable as maintenance, as removals, etc. For this purpose our workmen are provided with a so-called code book describing in considerable detail the operations which they perform and indicating for each a code number representing the account to which that operation is chargeable. Other segregations of their time must also be reported on these reports. For example, we maintain a separate book cost record for each central office and for each building, so the workman is required to identify on his time report the central office or building on which he is working. Again, we have a work order system under which the costs of all major

jobs, and many of the smaller ones in which we are particularly interested, are accumulated separately. This is done by requiring the workman to report his time according to the particular serial number which has been assigned to the job on which he is working.

These plant workmen, of course, use material from time to time, operate motor vehicles in the course of their jobs, use tools, etc. In order that such costs may all be charged against the appropriate maintenance, property, or other accounts, the workmen are required to make reports of all of these items, using the account codes and serial numbers mentioned in the discussion on time reports.

The reports are sent to the accounting office where the usual accumulating and tabulating processes are followed using punched card systems, peg-board methods, manual sorting and tabulations, and whatever other methods are best fitted for each particular phase of the work. Monthly accumulations of the hours of labor, items of material, and so on, are made according to all of the various segregations as to accounts and job orders, after which prices are applied, overhead distributed, and appropriate journal entries prepared. In general, it is our practice to price material at the average cost at which items of the particular size, kind and class involved have been charged in to the supply account during the previous month. With respect to labor, the general practice is to determine the total number of hours reported as chargeable to account codes during the month by each craft and to divide these total hours into the total payroll dollars for that craft, thus obtaining an average hourly rate which includes the cost of absent time paid for, vacations and foremen's wages. This rate is then applied to the hours shown as productive on the time reports and the resulting amounts charged out to the accounts indicated on these reports.

Overhead Distributions

As indicated earlier in this discussion, the accounting system under which we operate provides that our books be maintained on an actual cost basis. Accordingly, in making overhead distributions each month to the appropriate property, maintenance and other accounts, we use rates developed from the actual overhead costs

incurred rather than standard rates, as is common in some industries.

In accounting for the various classes of overhead expense, it is our practice to accumulate those which may properly be distributed to the property and maintenance accounts in so-called "clearing accounts" as expenditures are made during the month and to clear the amounts so accumulated to permanent accounts having a balance-sheet or profit-and-loss-statement status before the books are closed for the month.

Because of the number of types of overhead involved and the varying operations to which they are properly applicable, we use a number of different bases in effecting their distribution. A brief description of some of the more important types of overhead cleared each month, together with a statement as to the general method followed in effecting the clearance, may be of interest.

1. In the New York Telephone Company we operate a number of different kinds of shops to handle work which can be performed most satisfactorily at a point where shop equipment can be made available. The four most important kinds are: the teletypewriter shops at which the teletypewriter instruments are assembled in preparation for installation, repaired and cleaned; battery shops where spare stocks of batteries for use in connection with private branch exchanges and central office equipment are maintained; real-estate shops where work on building equipment and furniture is carried on, and out of which the building mechanics, who make minor repairs to our central office and other buildings, operate; and finally, form shops where cables in special sizes and shapes to meet individual installation conditions are made ready for service. The general practice followed in distributing the expenses applicable to the operation of these shops is to accumulate costs for each month and to have the shop men report to the accounting offices during the month the various property, maintenance and other accounts chargeable with their productive time. At the close of each month the total hours reported as productive for each shop are divided into the total costs of operating that shop and a rate of shop expense per shop man's productive hour is obtained. This rate is then applied to the number of hours reported as

chargeable to each account and job order during the month and the amounts so determined cleared from the temporary shop expense account to the appropriate final accounts.

2. In a similar manner all costs associated with motor vehicle operation are accumulated in a temporary account and cleared to the accounts appropriate for the jobs on which the vehicles have been used. In this case, a vehicular rate per hour-in-service is used as the basis for determining the amounts to be cleared to each final account. The hour-in-service for each vehicle, subdivided according to the appropriate property, maintenance, and other accounts and according to job orders, are reported to the accounting office currently through the month. In effecting these clearances we have grouped all vehicles into a number of classes, all cars in a particular group having comparable operating costs. Separate rates are developed for each class so that amounts cleared as representative of the cost of operating a small passenger vehicle, for example, are not weighted with the much higher costs of operating a large truck. The costs accumulated and cleared in this manner include all of the operating expenses applicable to our motor vehicle fleet, including gasoline, repair costs, tire and tube replacements, storage, license fees and depreciation on equipment. It is rather interesting to note that we use hours-in-service rather than miles run as a basis for distributing motor vehicle costs. This is done because many of our trucks are provided with special equipment, such as winches for use in erecting poles or in pulling cable, and earth-boring machines for digging pole holes. For this reason the truck frequently serves as an active useful tool for the plant workmen even though not running up additional mileage. Distributing the costs involved on a mileage rather than on an hour-in-service basis might result in inequitable allocations of costs to the various property and maintenance accounts.

3. The depreciation expense on our larger tools and the original cost of many small hand tools are distributed from a clearing account each month for the most part on the basis of the distribution to accounts of the total payroll for the forces by which they are used. In the case of some of the

larger highly specialized tools, a clearance on the basis of hours in service, similar to that followed for motor vehicles, is effected, but for the rest we find that actual tool costs follow with reasonable closeness the variations in labor costs.

4. Another type of cost accumulated in one of our clearing accounts is that known as Supply Expense. This item includes the cost of operating our storerooms where stocks of material for the use of the field workmen are maintained, the salaries and expenses of the supply organization in ordering and handling material, and transportation costs on unapplied material. These costs are distributed each month on the basis of the distribution to accounts of material used during the month as determined by the accounting office from the reports submitted currently during the month reflecting the account codes chargeable with all material placed.

5. Two major classes of overhead cost representing the salaries and expenses of employees and officials who supervise the construction and maintance of our property are recognized. One of these, known as Local Plant Administration, includes such costs for employees above the grade of foremen, whose jurisdiction is confined to particular crafts or groups of similar crafts. Such costs are distributed to the accounts charged with the labor costs for the classes of workmen actually supervised. The second type of this class of overhead includes the salaries and expenses of the higher officials of the Plant Department having supervision over all plant crafts and is distributed over the accounts charged with all plant labor in proportion thereto.

6. Similarly, different classes of engineering costs are recognized for distribution purposes. The chief distinction in this case is between the costs of local engineering organizations scattered about the territory in which we operate, and the general engineering organization charged with the broader phases of planning plant extensions and improvements and centralized at our headquarters buildings. Although the costs for the several types of engineering organizations are accumulated separately and distributed to property, maintenance and other accounts individually, the basic method followed in each case is the same. This method con-

sists in the determination, by means of periodic time studies, of the proper allocation of engineers' time according to major classes of plant work. Thereafter, the engineering costs incurred each month are allocated to these several classes of work on the basis of percentages developed from the time studies; the amounts thus determined are distributed to the accounts and jobs appropriate for the class of work in each case on the basis of the direct labor charges by plant workmen to those accounts and jobs. In the case of work done on the plant by outside firms working for the telephone company under contract, as in the case of the construction of a building, the total amount of bills rendered by the contractor is used in place of labor charges as the basis for distributing the engineering costs.

7. A rather interesting type of overhead expense in the telephone business is what we designate as "house service." This represents such costs as light, heat, cleaning and janitor services incurred in connection with the operation of our buildings. It does not include depreciation, or other carrying charges. Under our system of accounts, the expense account appropriate for the costs of operating each department must include that department's share of house service costs. Accordingly, we again make use of our clearing account device, accumulating all such costs therein as incurred, and at the end of each month dividing the total thereof by the total number of square feet of floor space occupied by all departments. The resulting rate per square foot is then applied to the number of feet of space by each department and the amount so computed charged to the expense account for that organization.

Work Order System

Because of the large sums which must be expended each year in extending, replacing and maintaining our plant, we have found it desirable to set up a rather comprehensive work-order system to provide adequate control over these operations. We have a number of different kinds of such work orders but for our purposes they may all be considered together. As intimated in the discussion of plant accounting processes, serial numbers are assigned to

cover the work involved on certain plants jobs and operations, and all time, material, and other items, which the field workmen report to the accounting office, must be classified according to the serial numbers with which they are properly associated. The computed costs, including the various types of overhead applicable to the units of time and material for each serial number, and then accumulated separately, after the close of each month's business, in the accounting office and reports thereof furnished to the operating and engineering officials interested. The data made available by these processes are used for a number of purposes, the more important of which are as a current control of expenditures during progress of a construction job, to insure that engineering plans are not varied materially; to determine the amounts to be billed subscribers and others in the case of special work, the rates for which are not covered in our tariff schedules; to provide comparative cost data for use in the course of subsequent engineering studies as to the relative construction costs of different types of plant; and to provide cost figures where new methods and practices are being tried out experimentally.

Retirement Unit Costs

Although not having a direct bearing on cost accounting practices or principles, I want to describe briefly the methods followed in the telephone business in determining the amounts to write out of our property accounts when we come to remove items of plant. You will, of course, appreciate that whenever a subscriber cancels his telephone service, or whenever we find it necessary, for example, to reconstruct our plant from overhead to underground, and in many other cases, it is necessary for us to deduct from our property accounts amounts representing the original cost of the property removed. Much of our property consists of a very large number of homogeneous items having a relatively low individual cost. Examples of such property are telephones, poles and service wires. In such cases it would be extremely uneconomical to attempt to maintain records of the original cost for each item. Accordingly, we are faced with the necessity of determining some average costs, the use of which will effect accurate reductions in our property accounts as plant is retired.

We develop these average unit costs in the following manner:

first, we maintain a cumulative record of the total number of major items of property charged to each plant account according to class, size and kind. For example, the major items chargeable to the pole line account are cross-arms and poles. For this account our record shows the total number of cross-arms of each size and the total number of poles of each size. It might be stated parenthetically that the cable and wire suspended from these pole lines is chargeable to another account and accordingly we are not interested in that here. Second, at any selected date we apply a set of prices to the quantities on our records. These prices reflect, as exactly as possible, the relationship between the installed costs for the several classes of items. It is not necessary that they indicate the true actual costs of the items, but merely that they express correctly the ratio of each to the other, for reasons which will develop as we proceed. Third, we relate the book balance for the account with which we are working to the sum of all the amounts obtained by multiplying the foregoing quantities and prices, thus obtaining the percentage relationship between these two figures. Fourth, we apply this percentage to the individual prices for the various major items of plant, thus scaling all of those prices upward or downward proportionately. The amount of the change in each price is thus automatically exactly enough so that if we now multiply the quantities on our records by the new prices we will obtain a series of amounts, the total of which exactly equals our book balance, and thus if we retired all of the plant charged to the account under consideration we would write out all of the dollars from the property account.

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Cost or Market, Whichever Is Lower	October 15
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Costs and Commercial Art	November 15
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Savings-Sharing Incentive Plan for Salesmen	May 15
Cotton Mills and the Futures Market	June 1
Cost Distribution in the Telephone Business	June 1

ATTENTION!

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JUNE 25, 26, 27, 28, 1934